FIG. 1

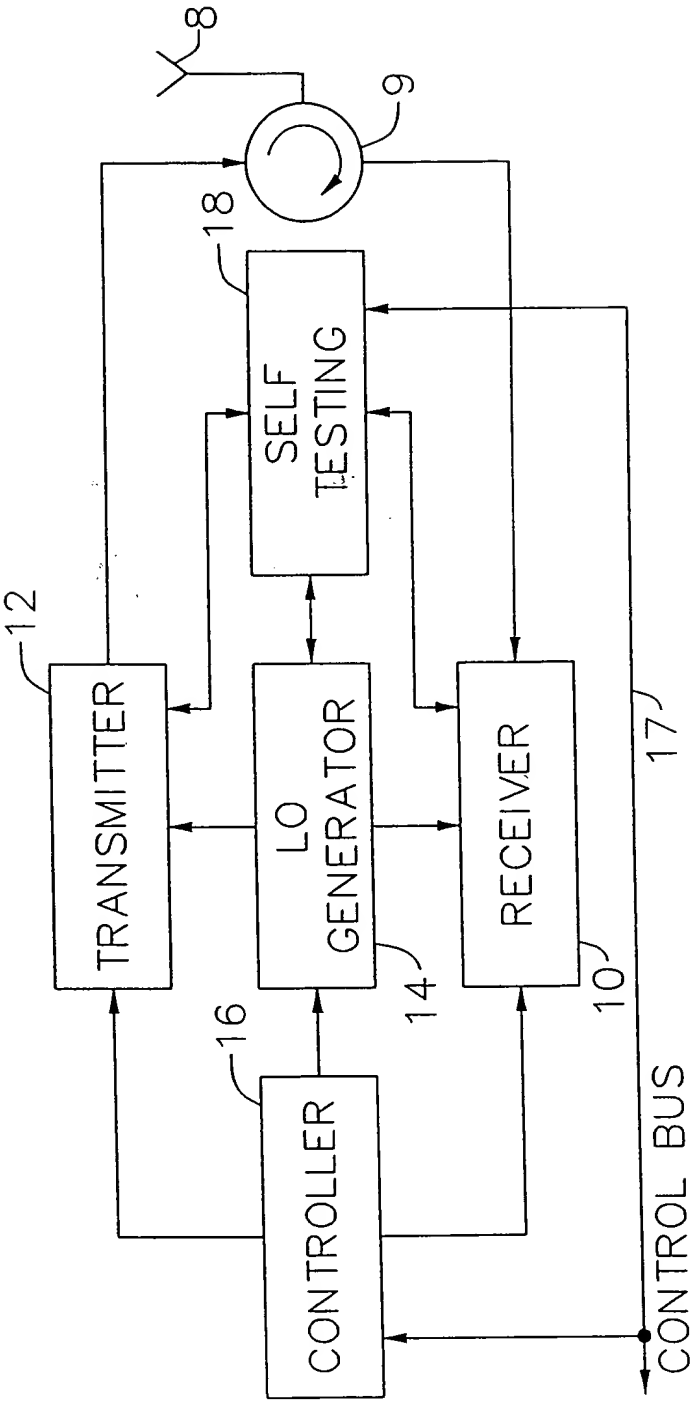


FIG.2

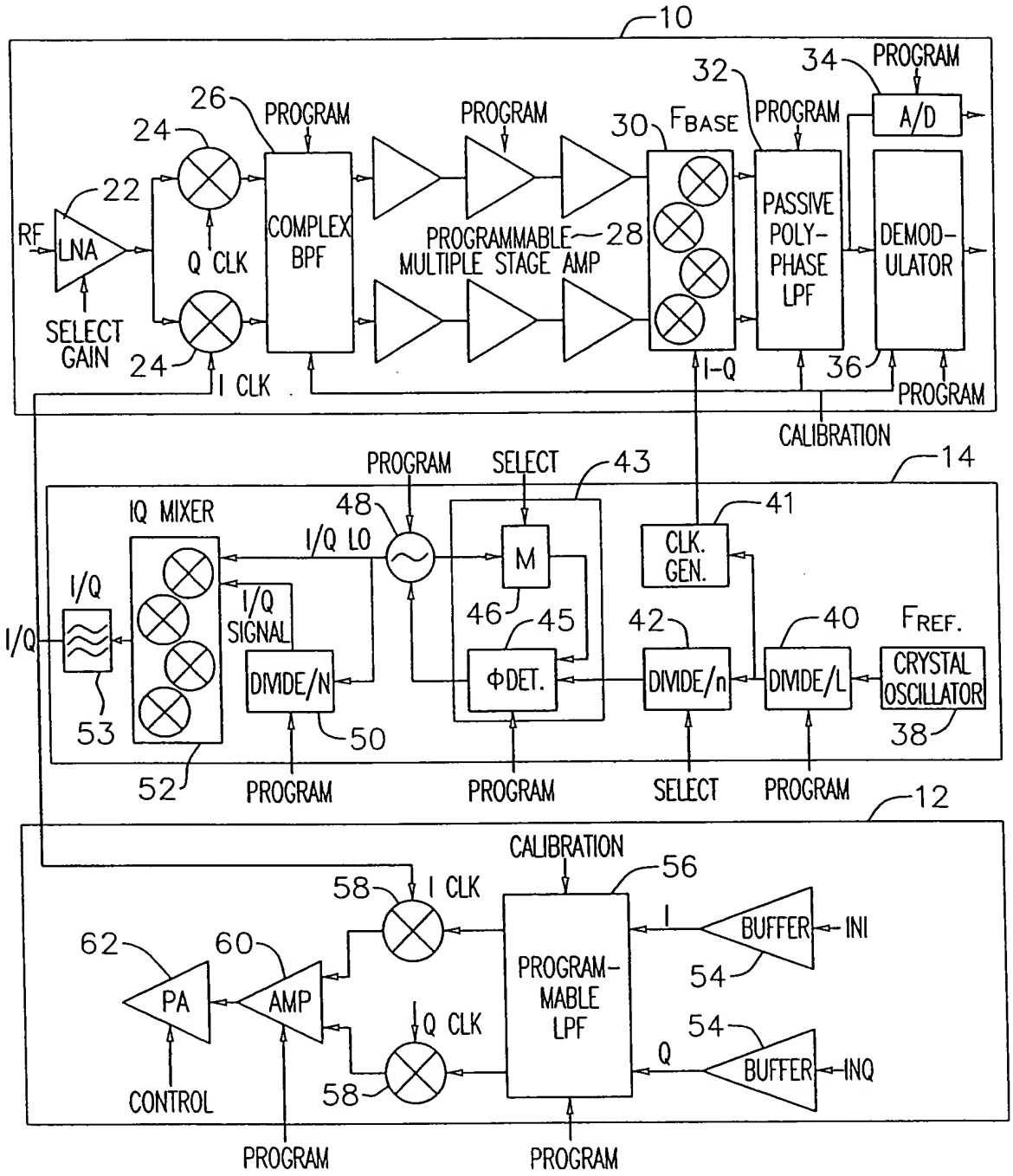


FIG.3

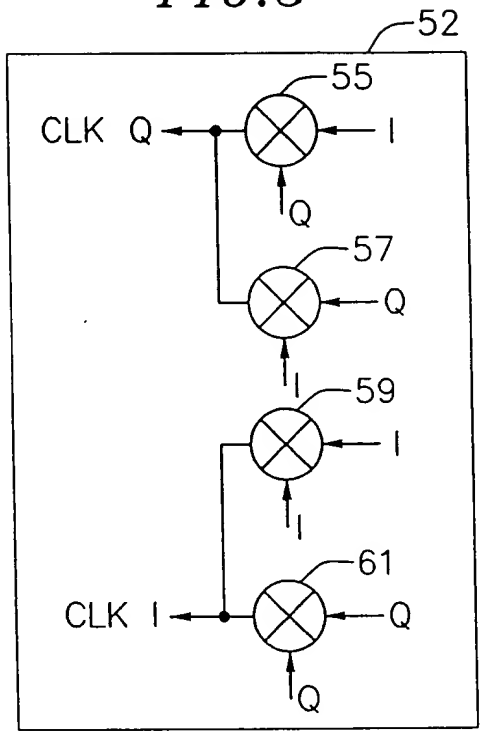


FIG.4

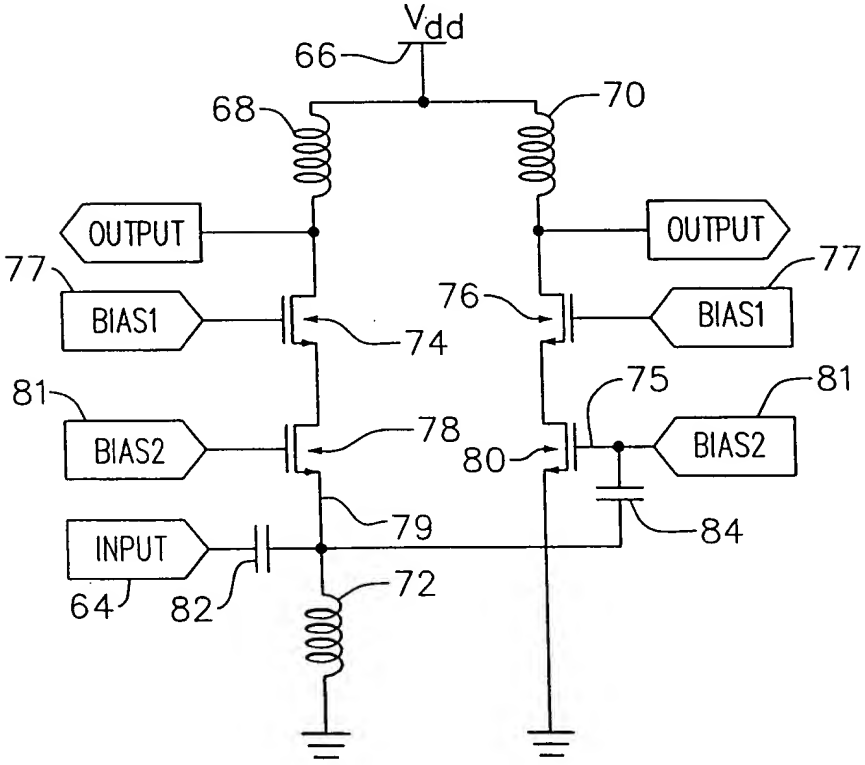
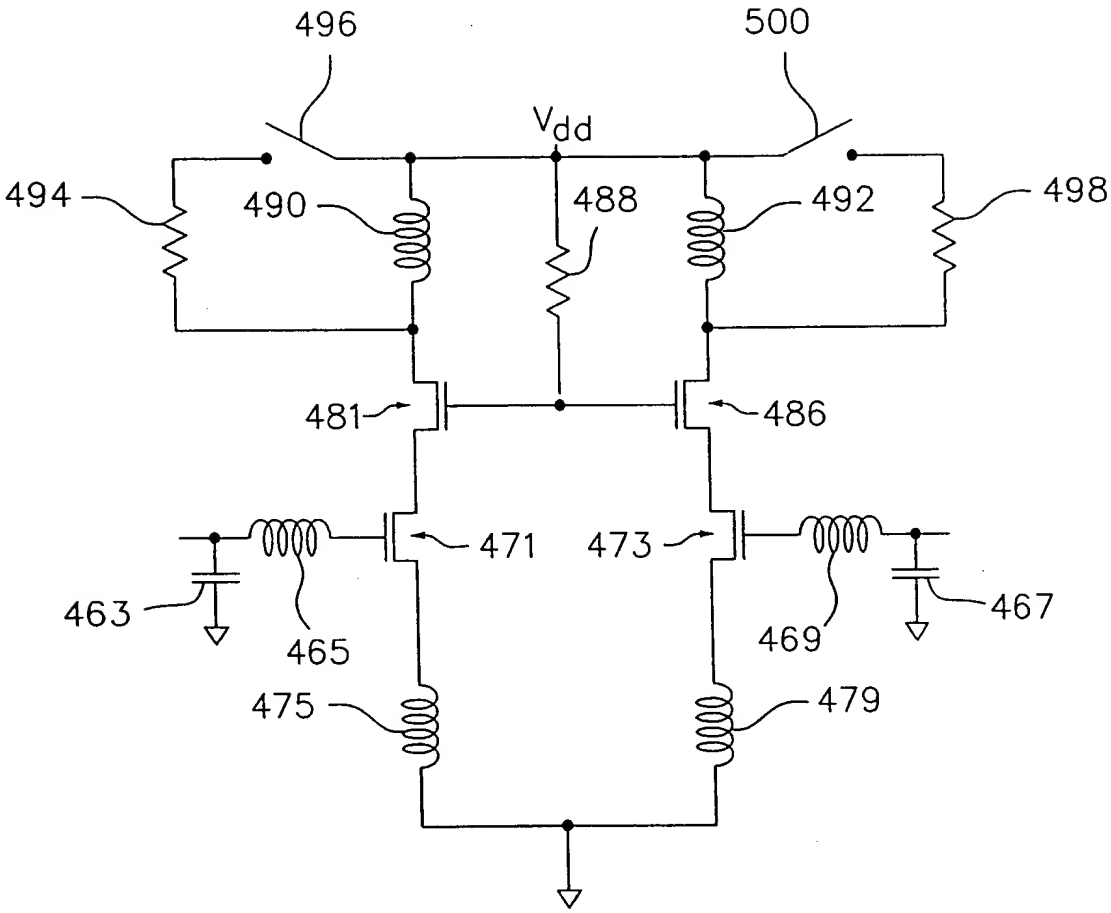


FIG. 4(α)



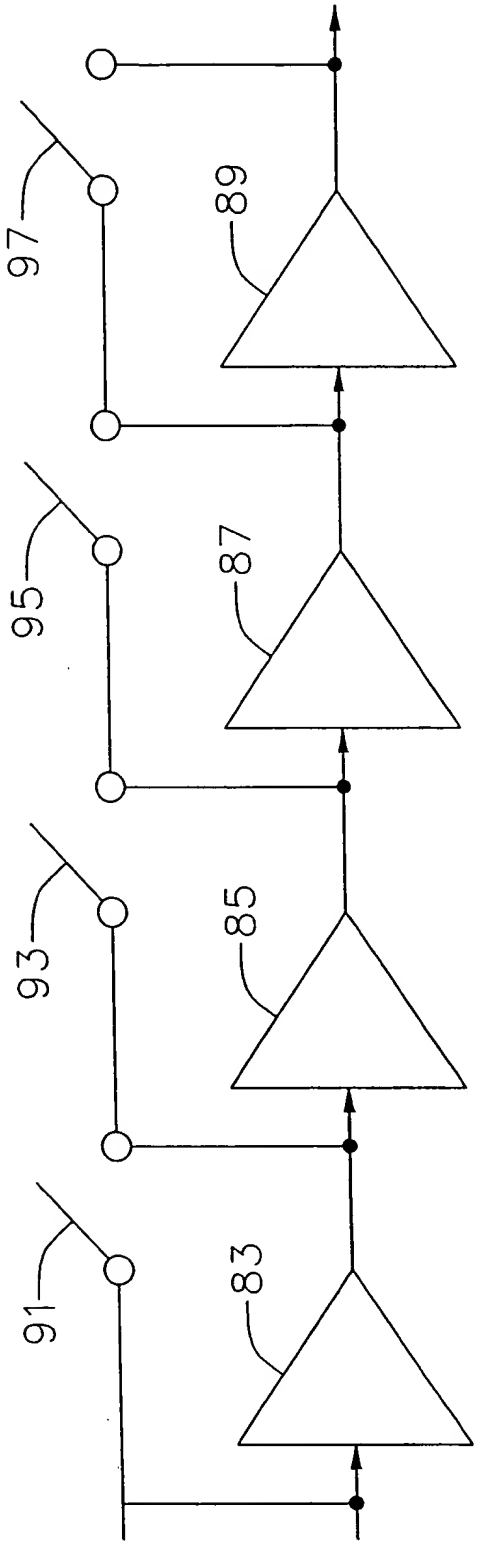


FIG. 5

FIG. 6

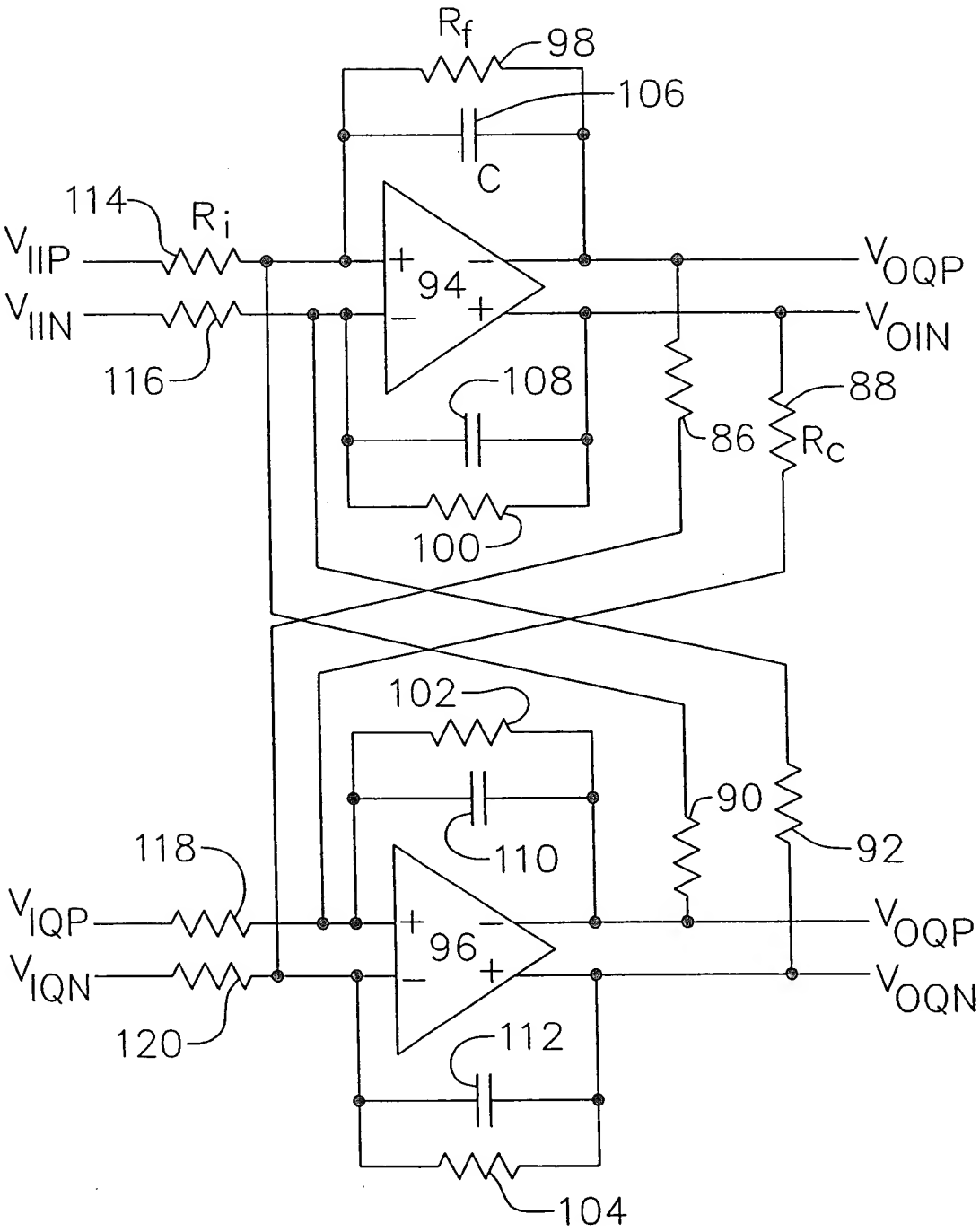


FIG. 7

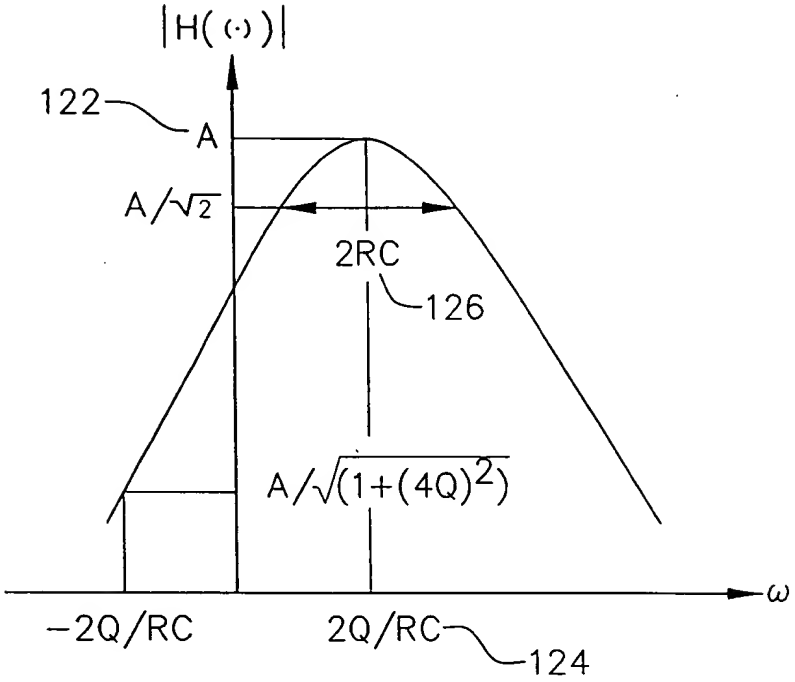


FIG. 8

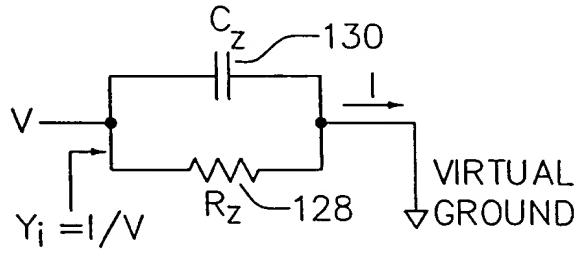


FIG. 9

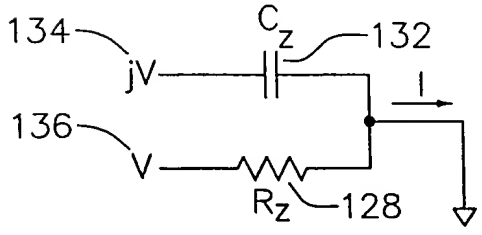
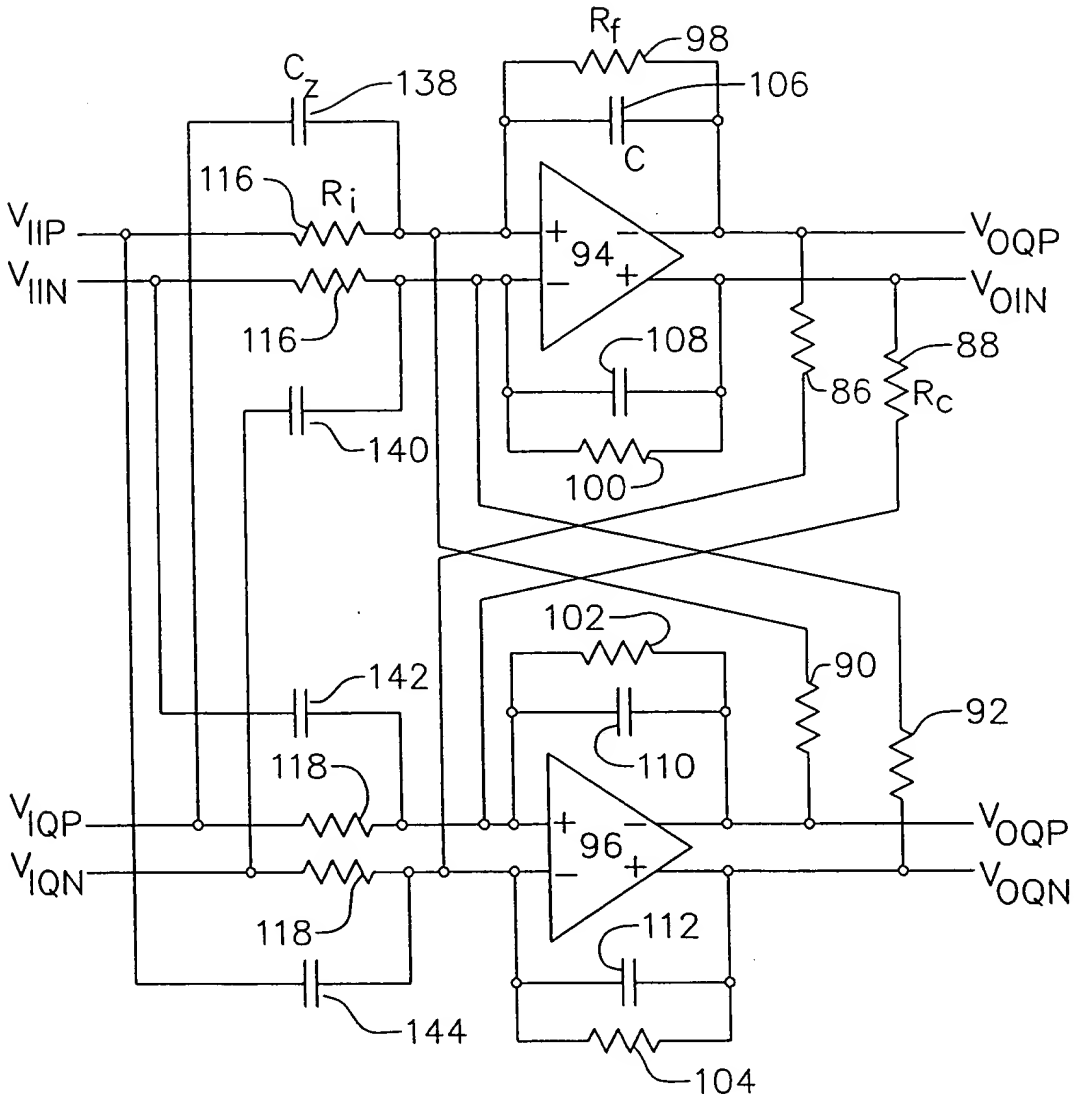


FIG. 10



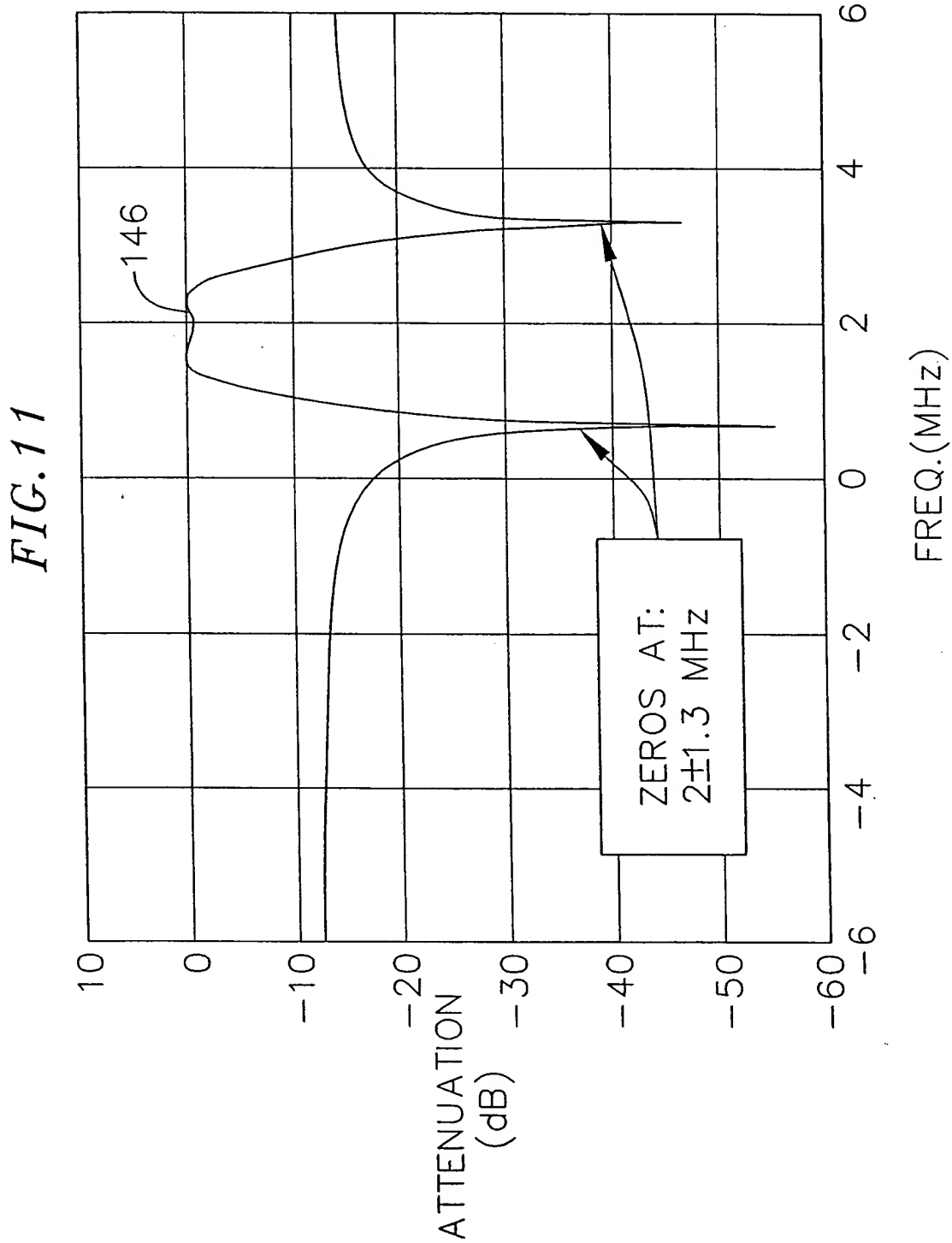


FIG. 11

FIG. 12(a)

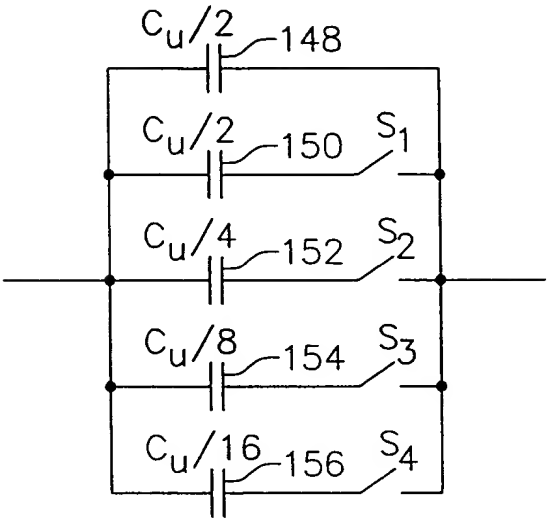


FIG. 12(b)

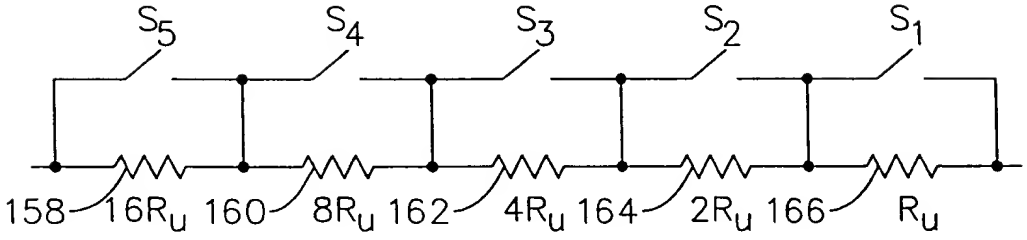
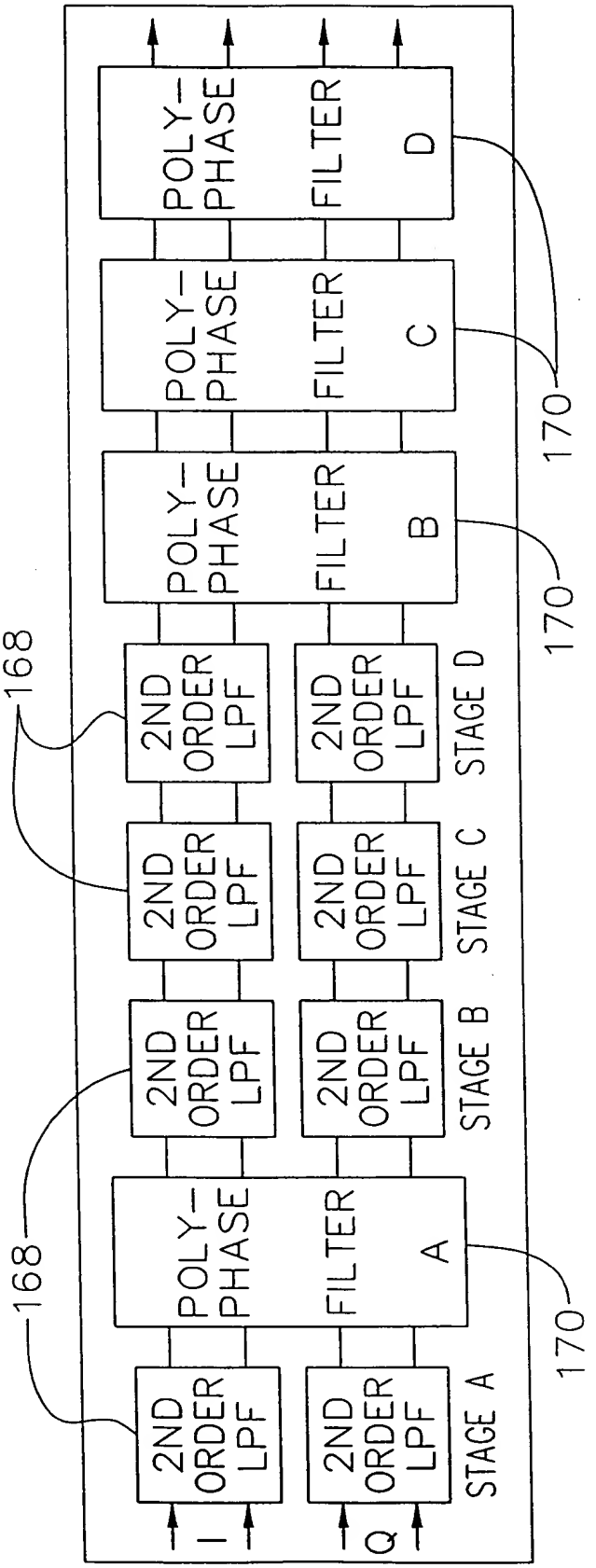


FIG. 13



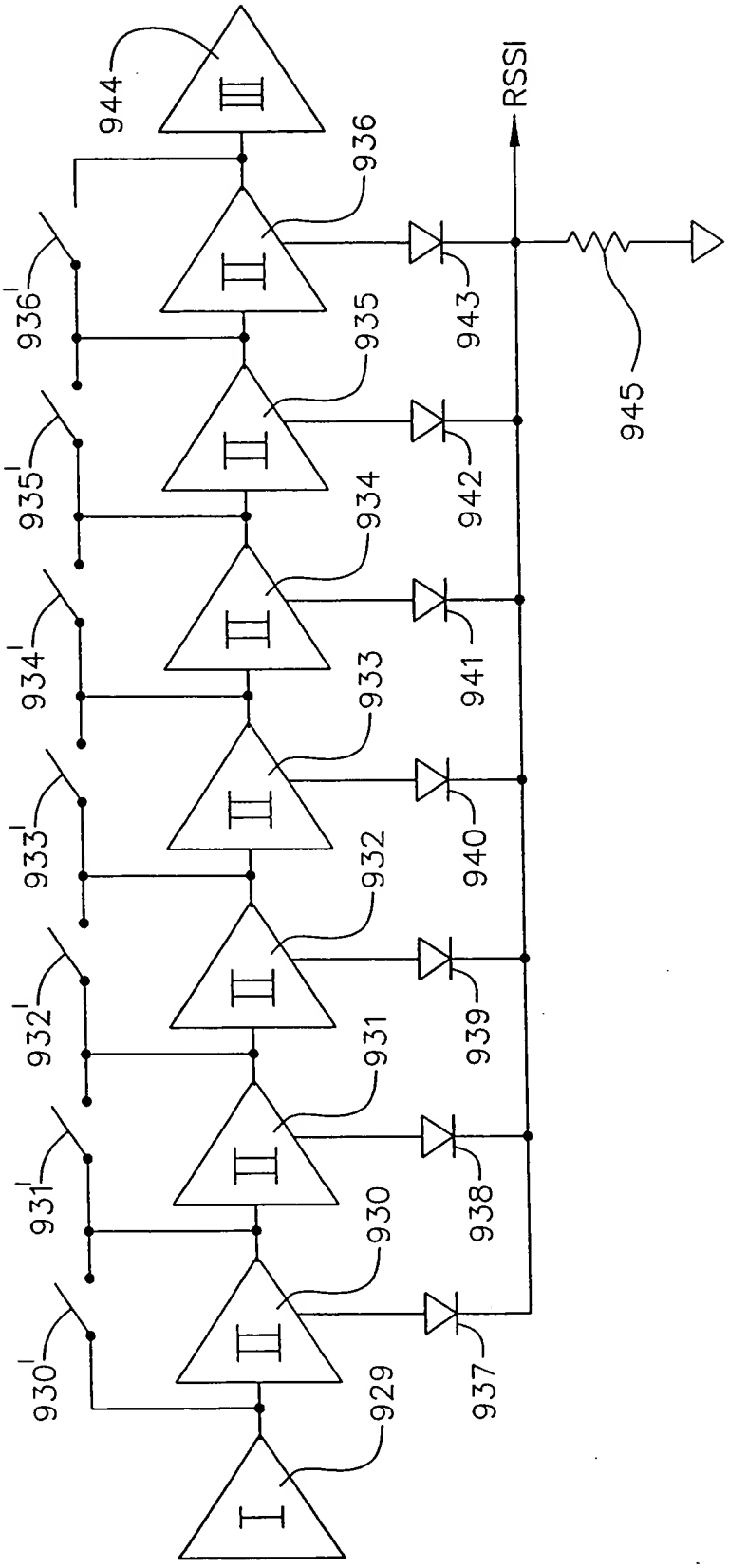


FIG. 14

FIG. 15

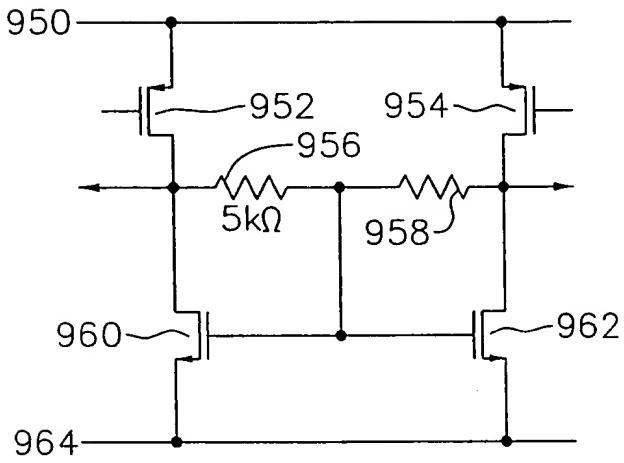


FIG. 16(a)

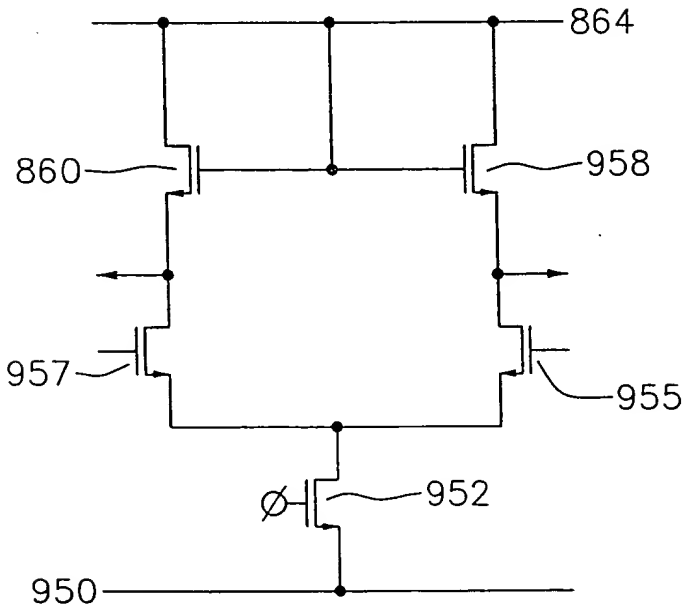


FIG. 16(b)

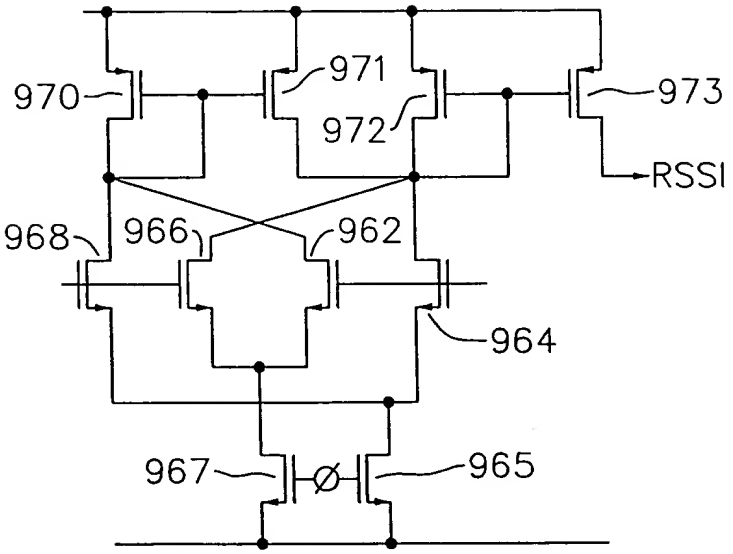


FIG. 17(a)

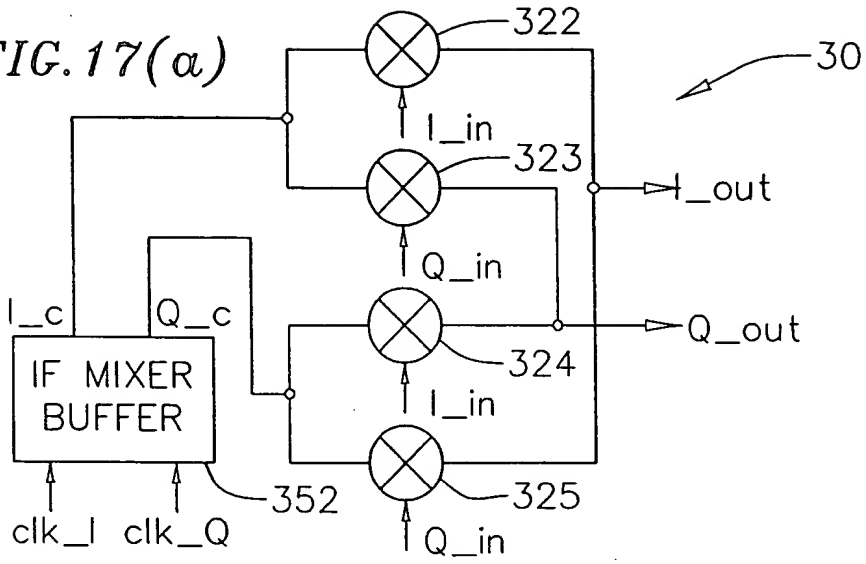
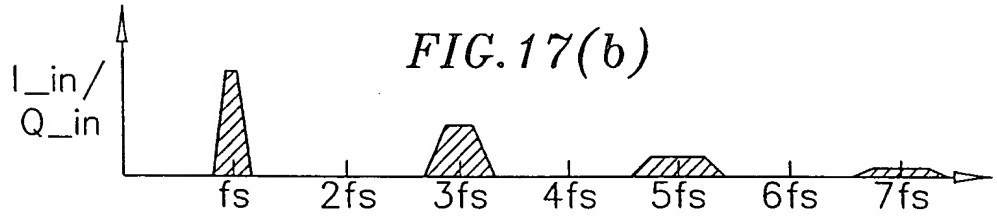
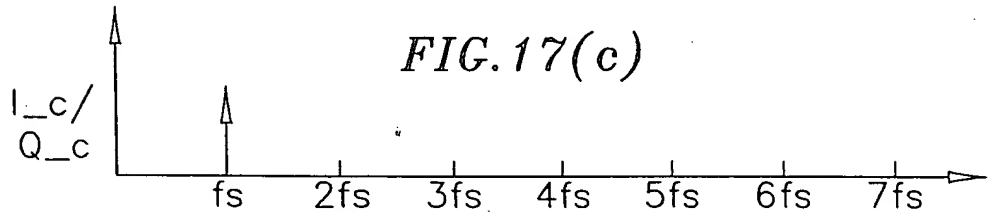


FIG. 17(b)



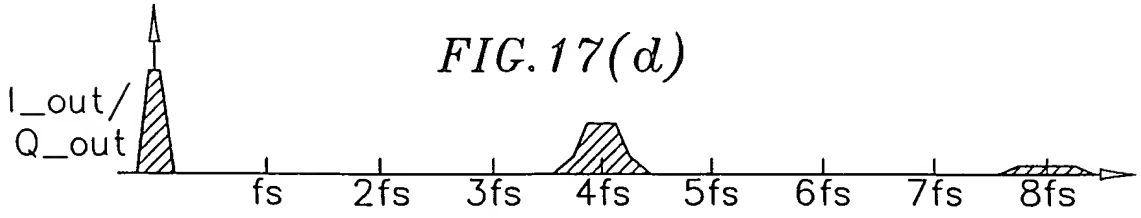
LIMITED IF SIGNAL SPECTRUM

FIG. 17(c)



SINUSOIDAL INPUT SPECTRUM

FIG. 17(d)



IF MIXER OUTPUT SPECTRUM

FIG. 18

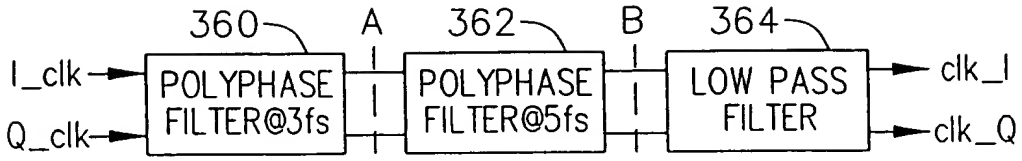
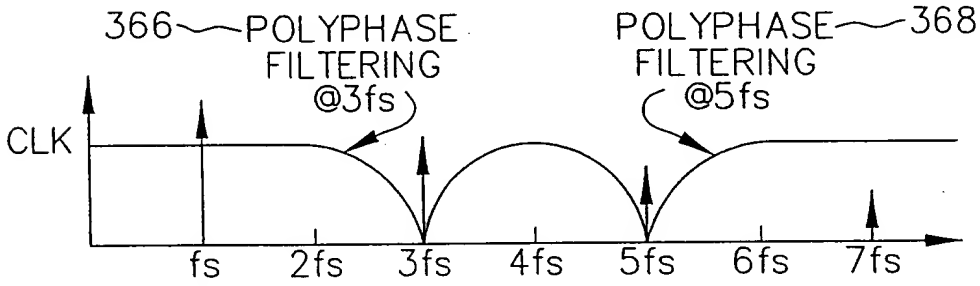
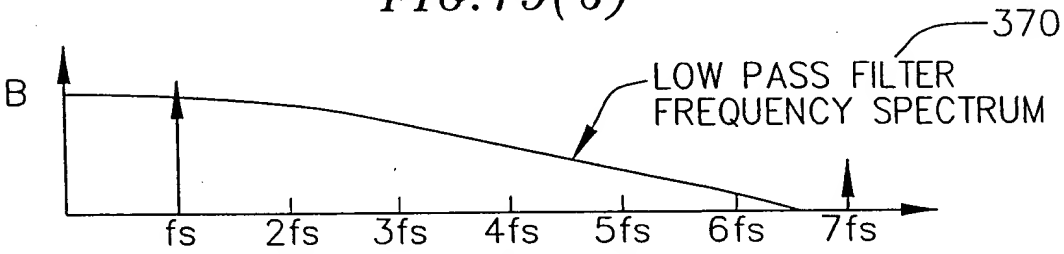


FIG. 19(a)



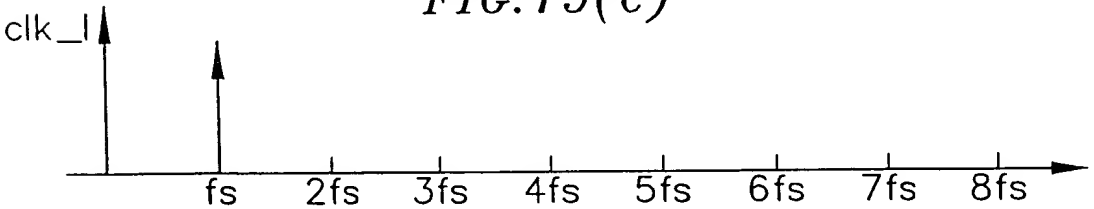
DIFFERENTIAL INPUT CLOCK SIGNAL SPECTRUM

FIG. 19(b)



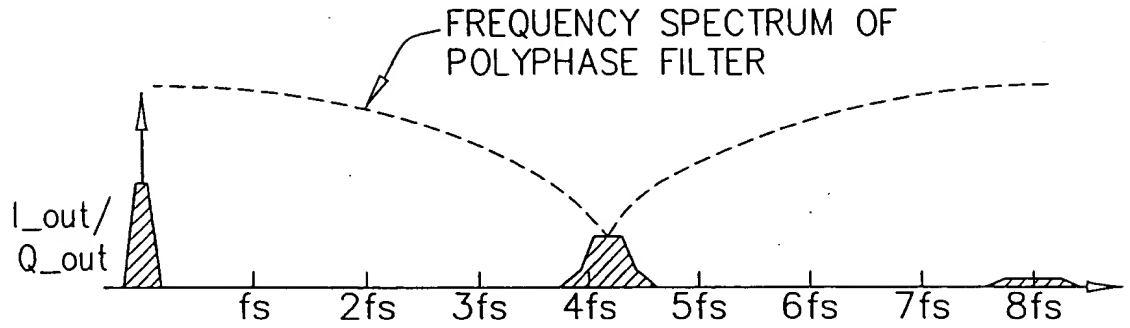
SIGNAL SPECTRUM AFTER 3fs AND 5fs POLYPHASE

FIG. 19(c)



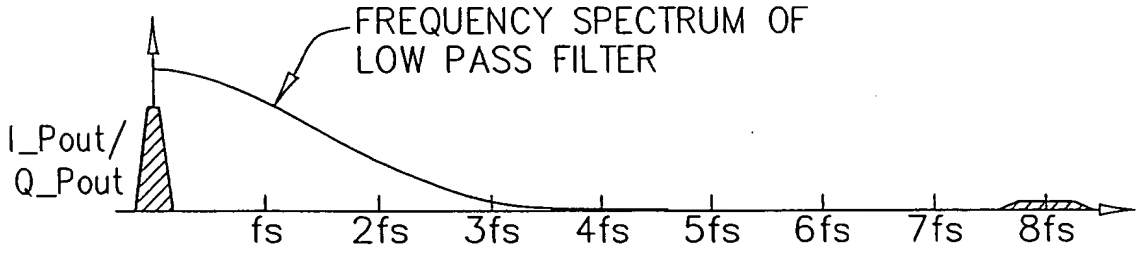
SINUSOIDAL SIGNAL GENERATION AFTER LOW PASS FILTER

FIG.20(a)



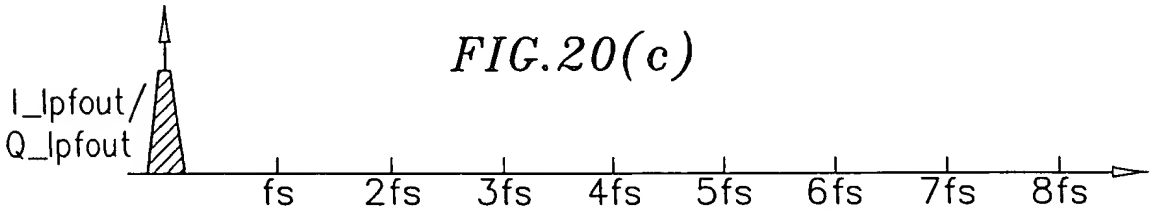
SIGNAL SPECTRUM AT POLYPHASE INPUT

FIG.20(b)



SIGNAL SPECTRUM AT POLYPHASE OUTPUT

FIG.20(c)



SIGNAL SPECTRUM AT LOW PASS FILTER OUTPUT

FIG.21

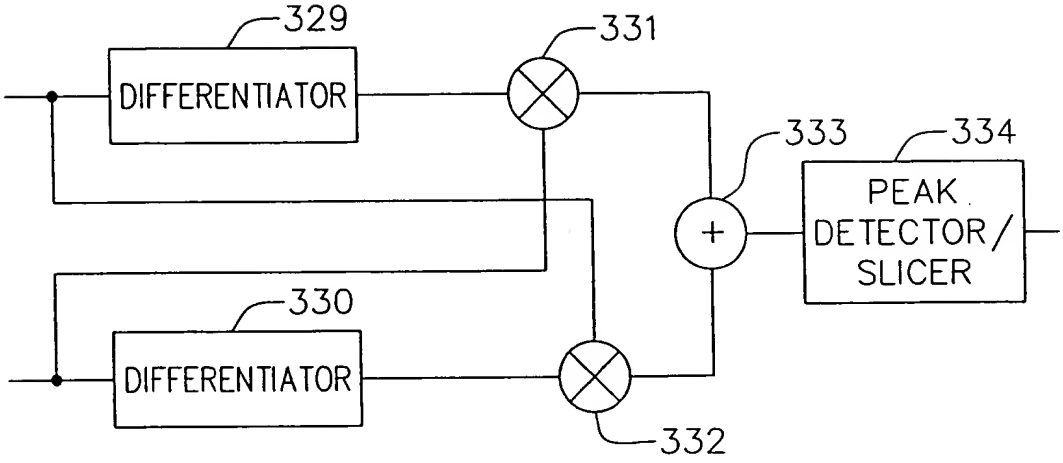


FIG.22

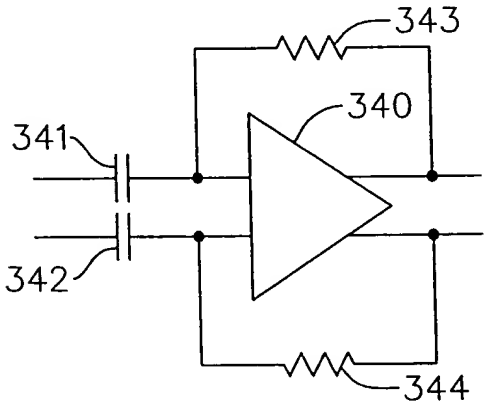


FIG.23

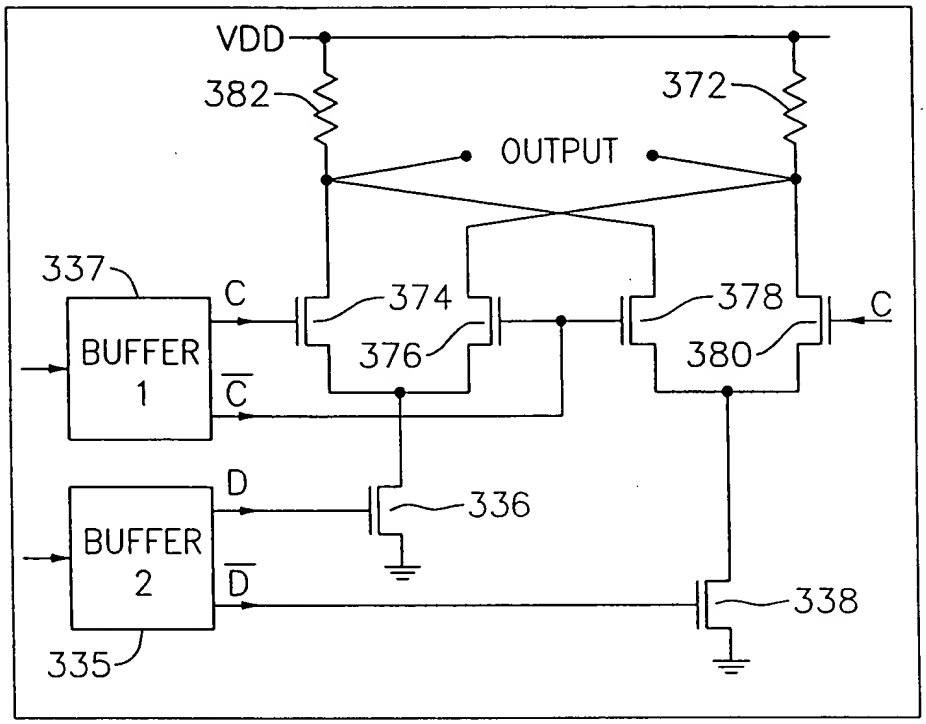
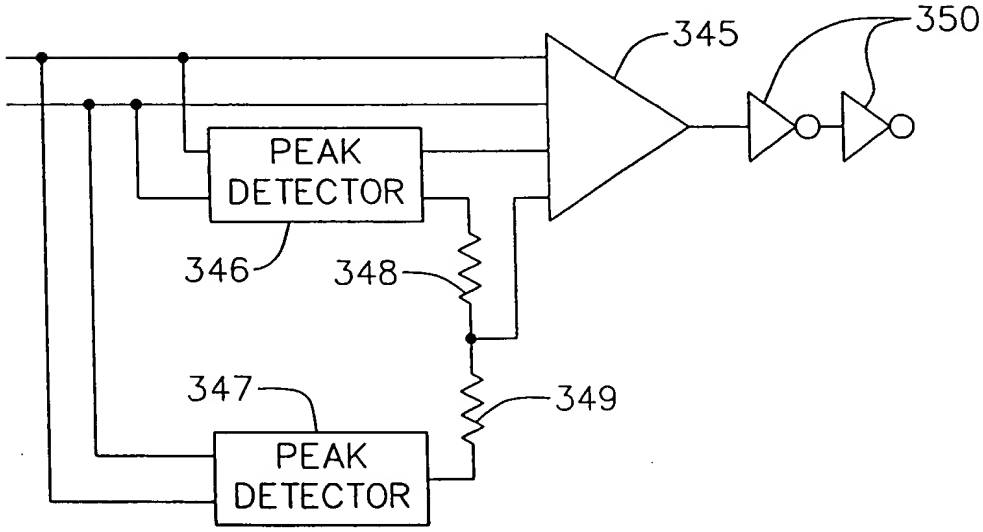


FIG.24



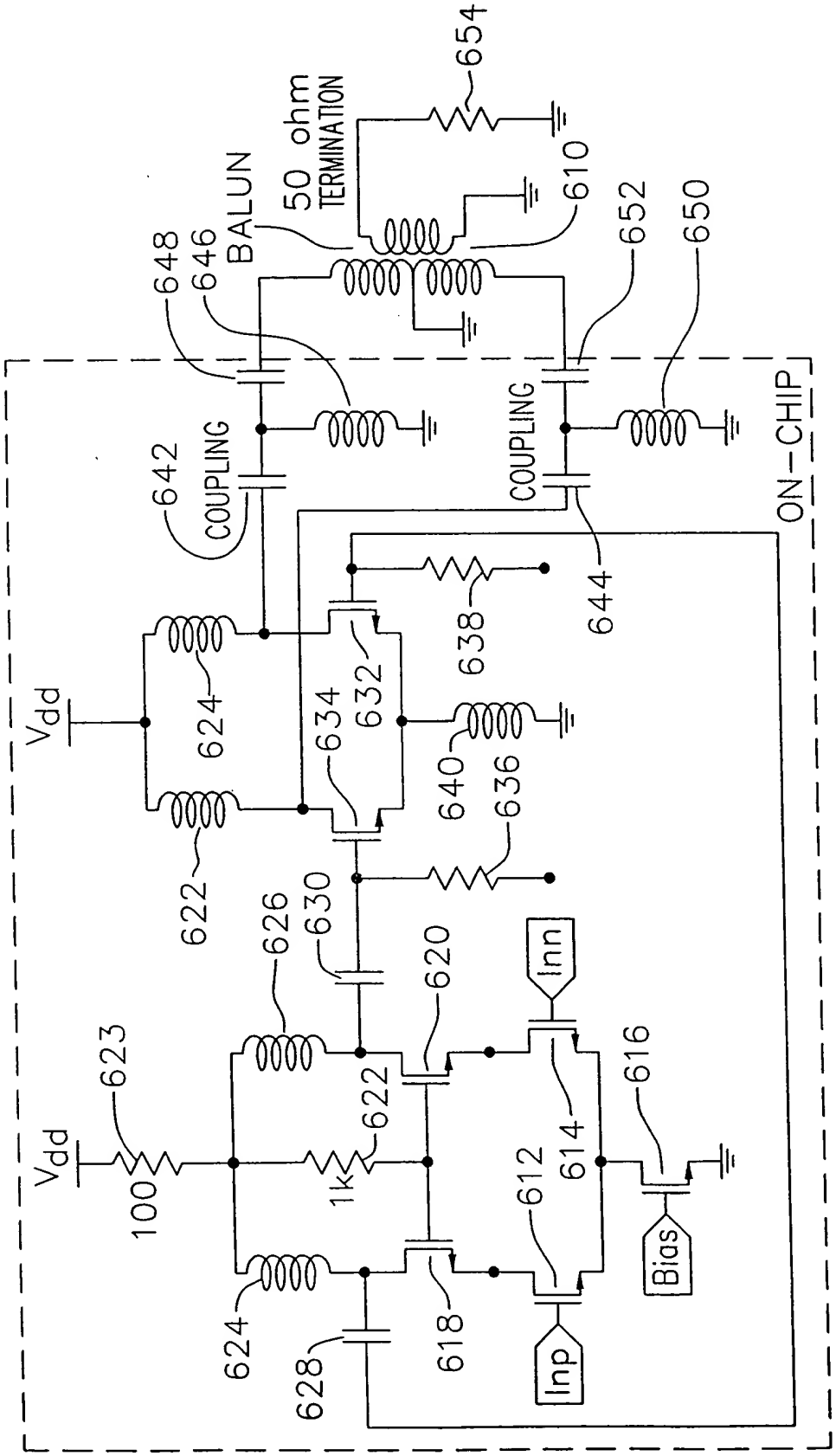


FIG. 25

FIG.26(a)

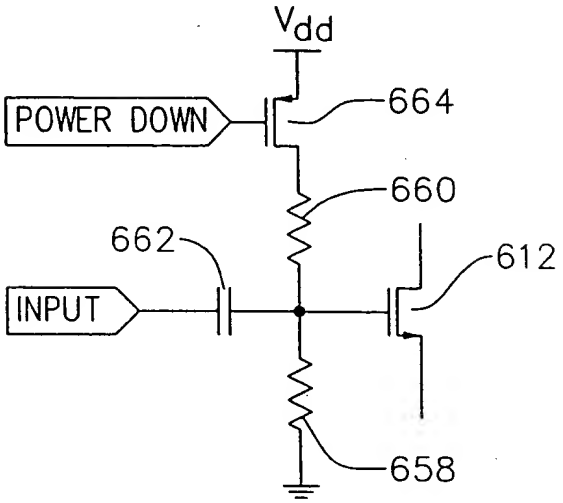


FIG.26(b)

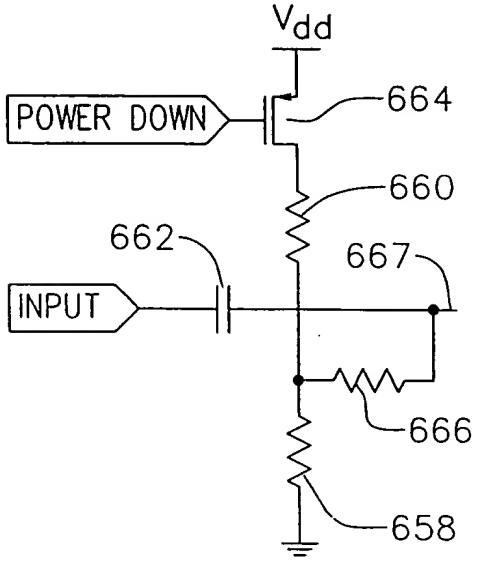


FIG.27

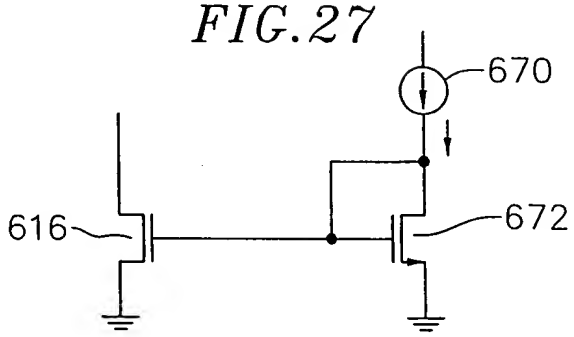


FIG.28

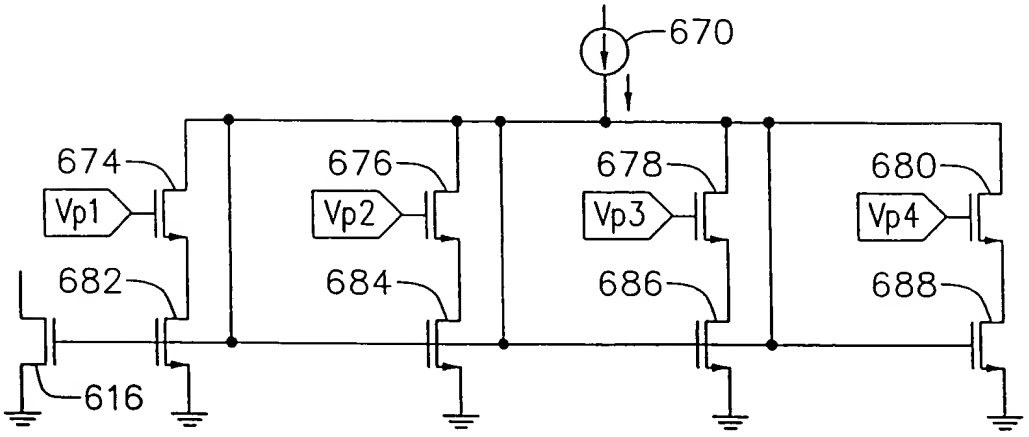


FIG.29

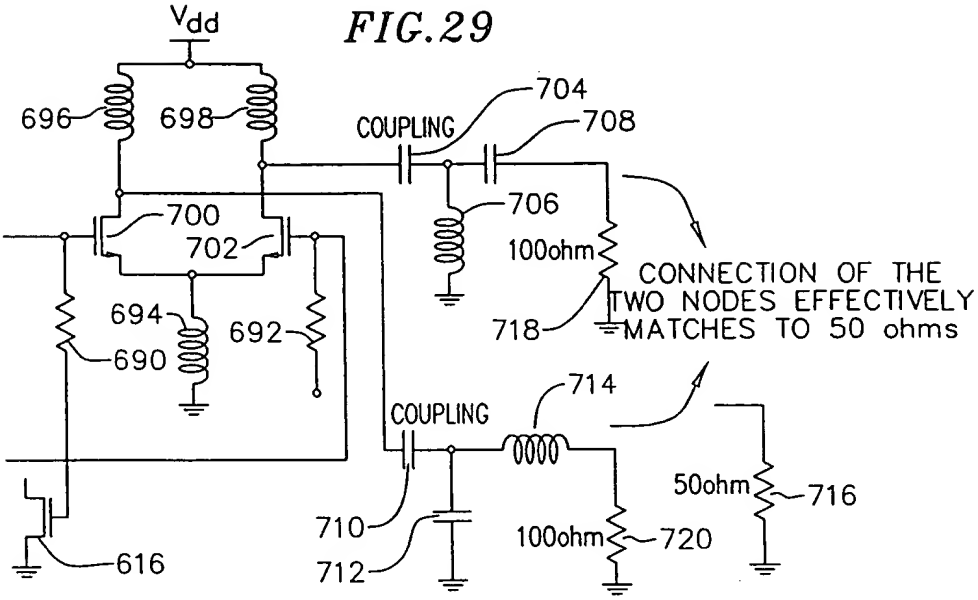


FIG.30

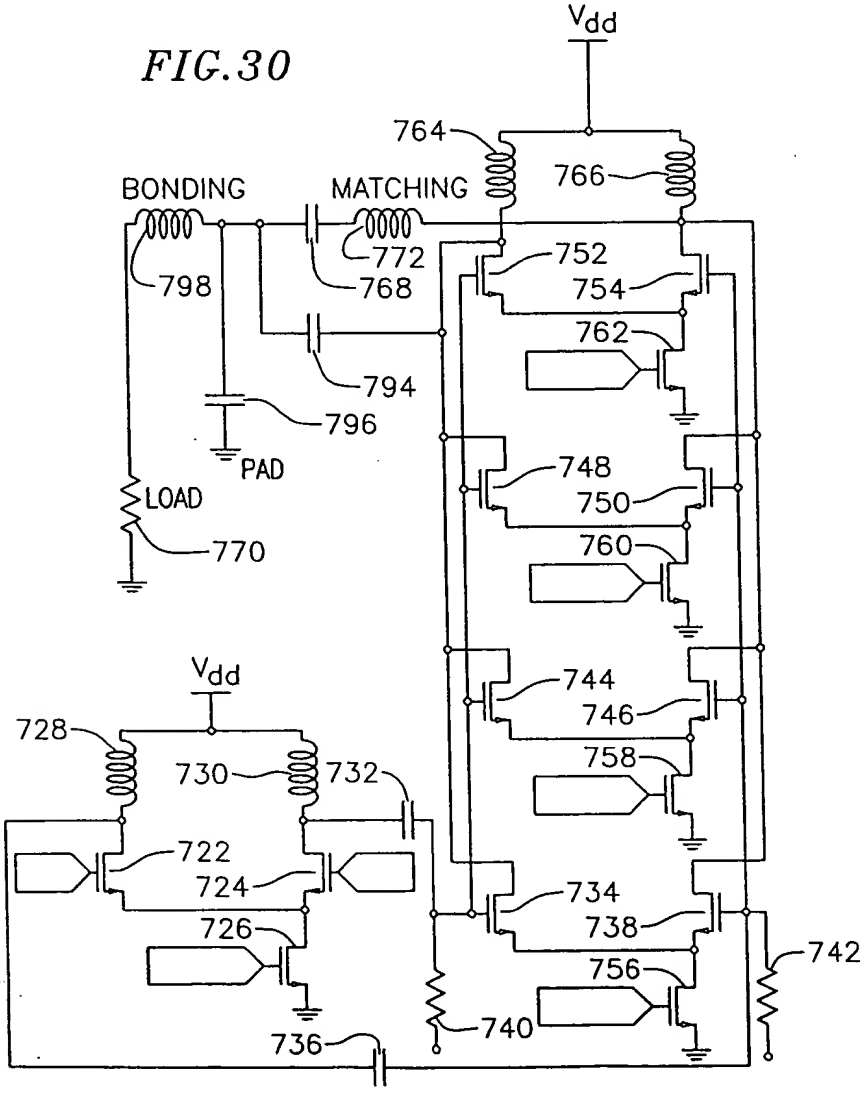


FIG.31(a)

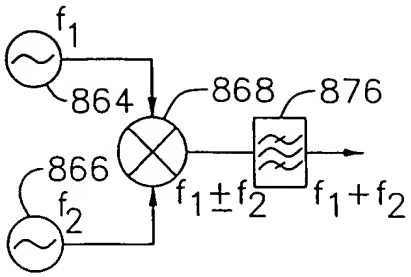


FIG.31(b)

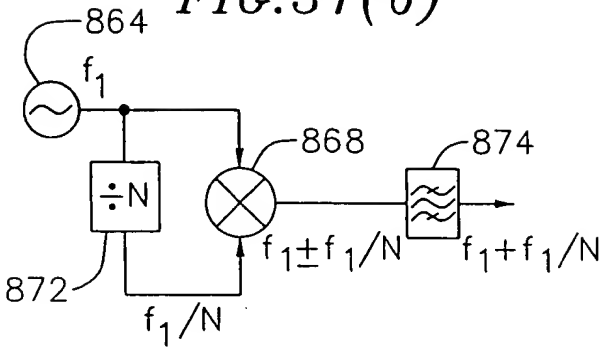


FIG.32

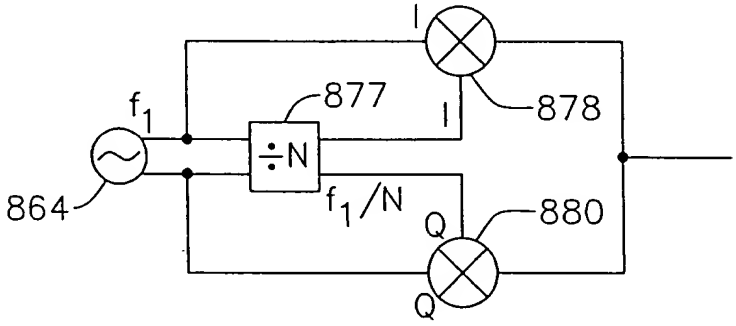


FIG.33

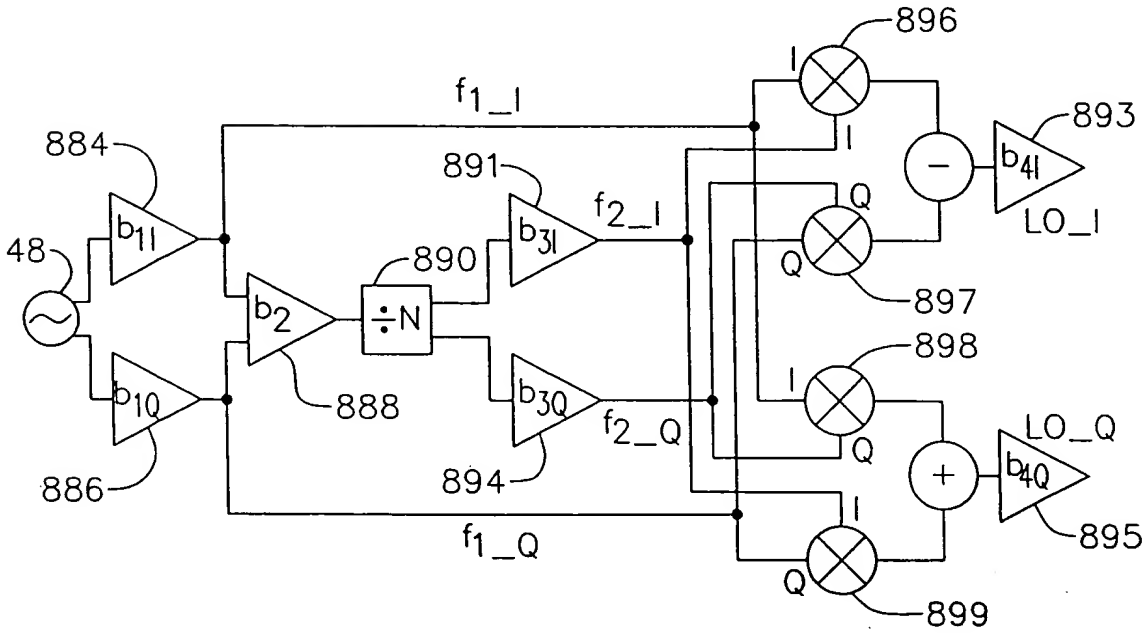


FIG.33(α)

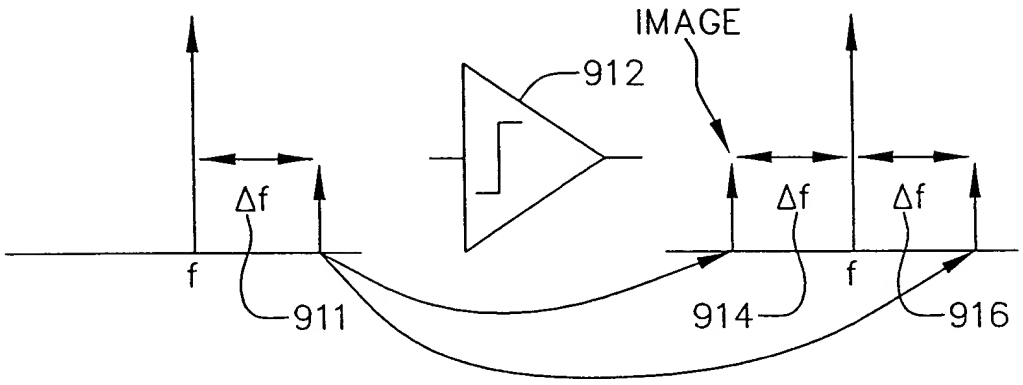


FIG.34

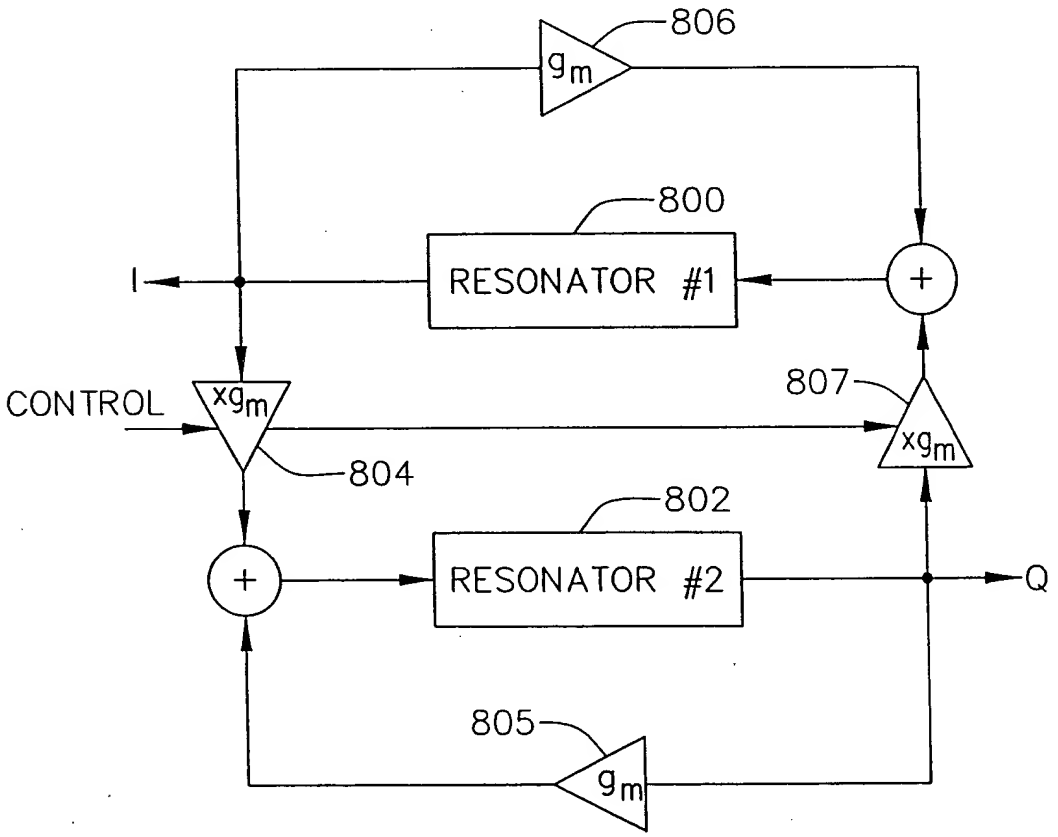


FIG.35

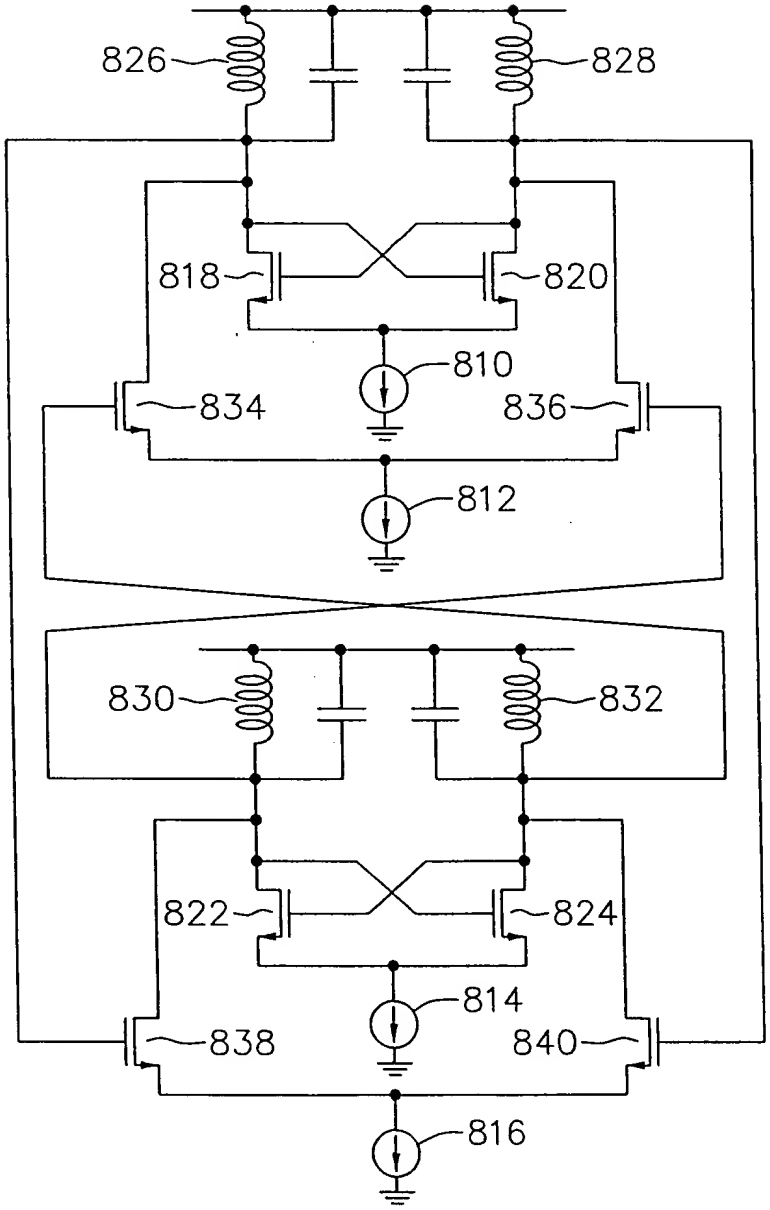
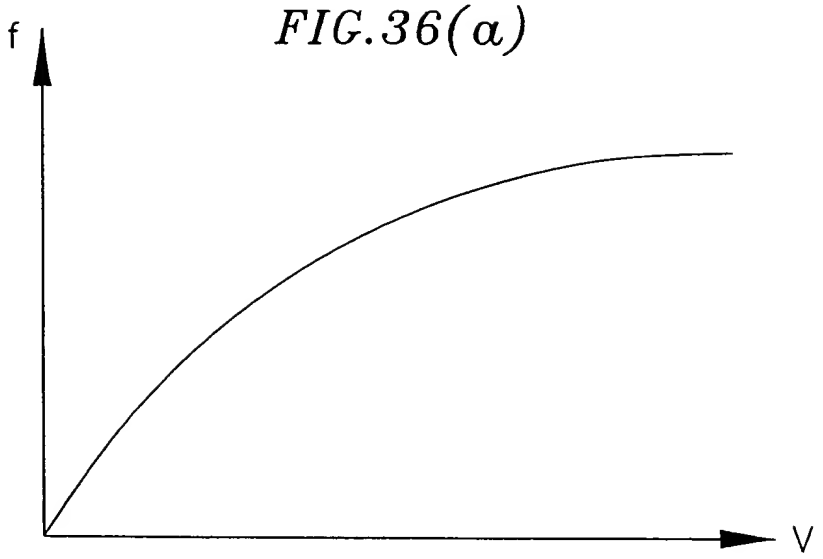
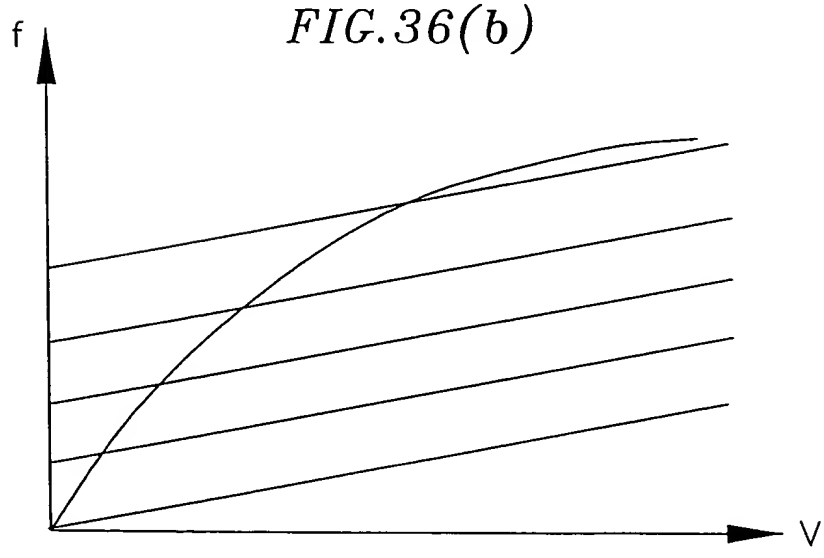


FIG.36(a)



TYPICAL VCO TUNING CURVE

FIG.36(b)



SEGMENTED VCO TUNING CURVE

FIG.37(a)

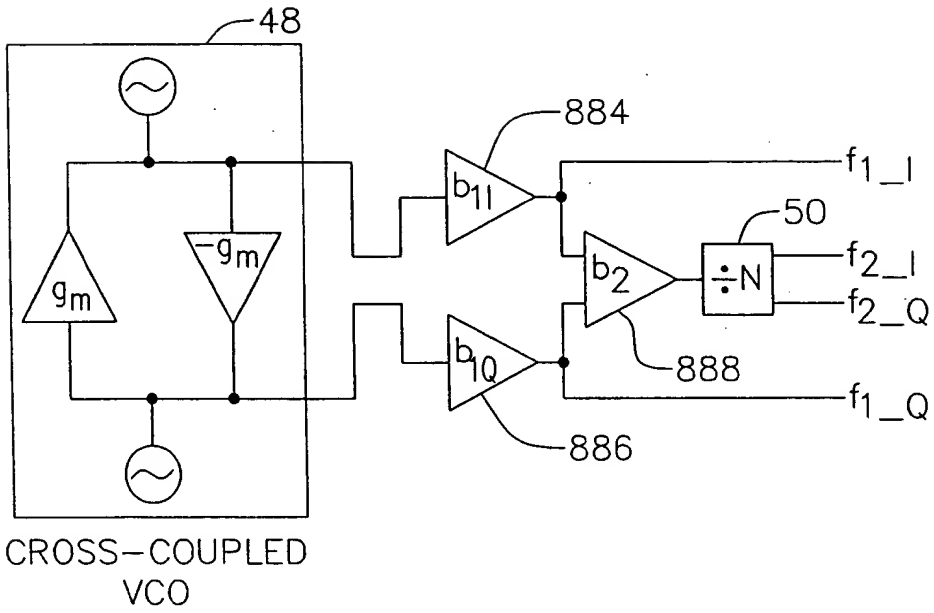


FIG.37(b)

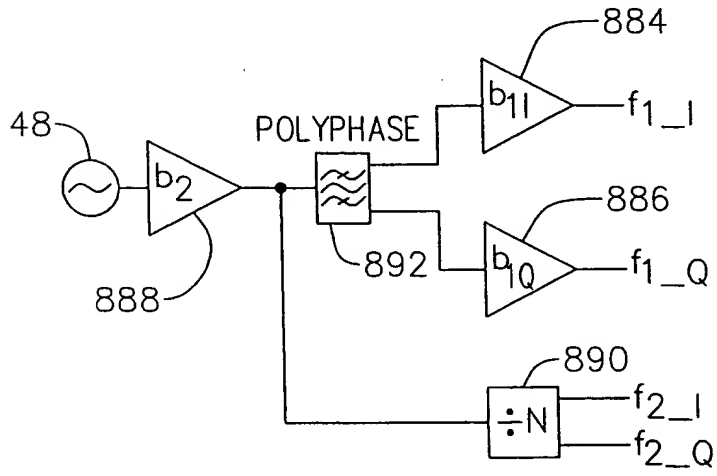


FIG.38

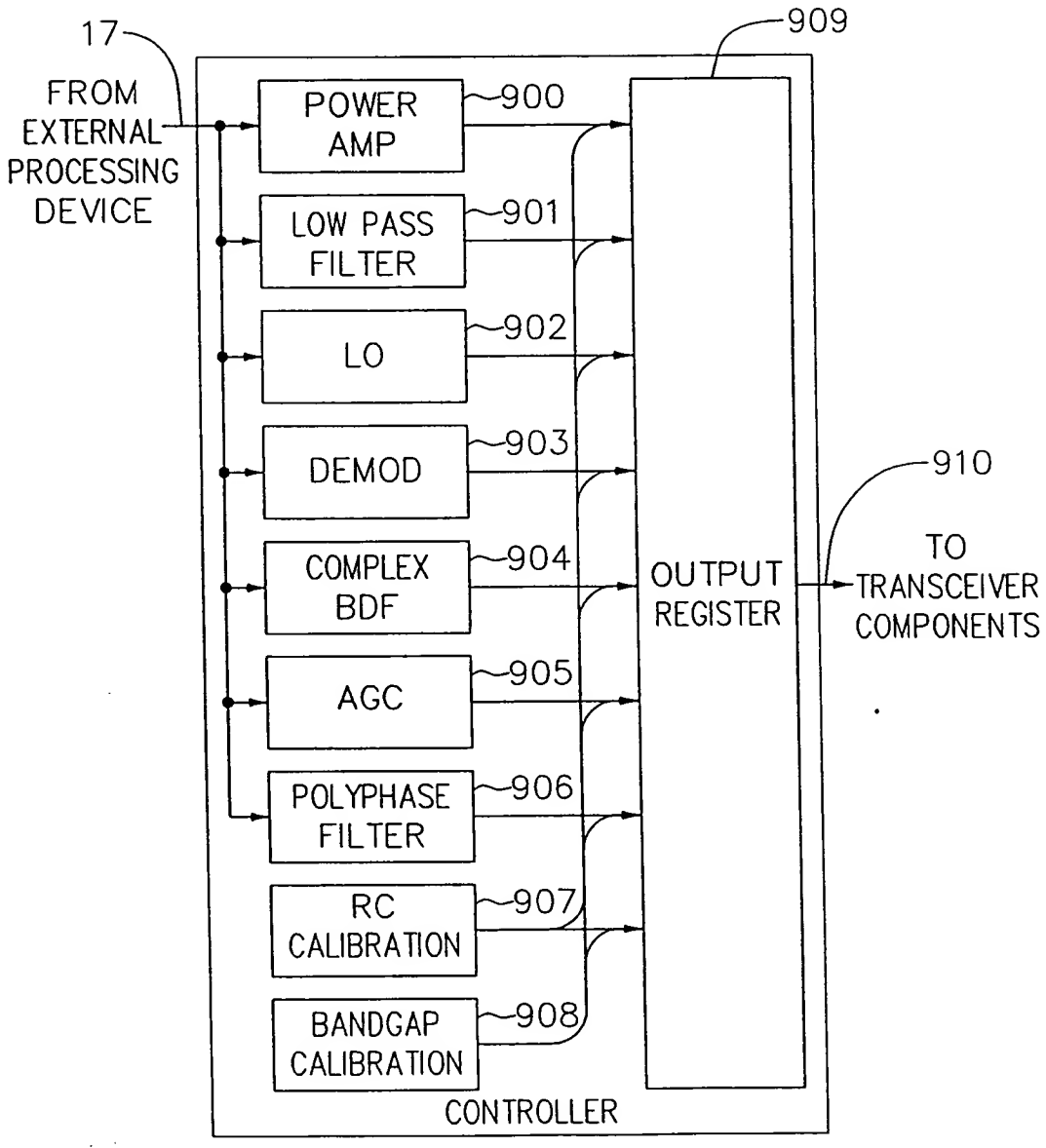


FIG. 39

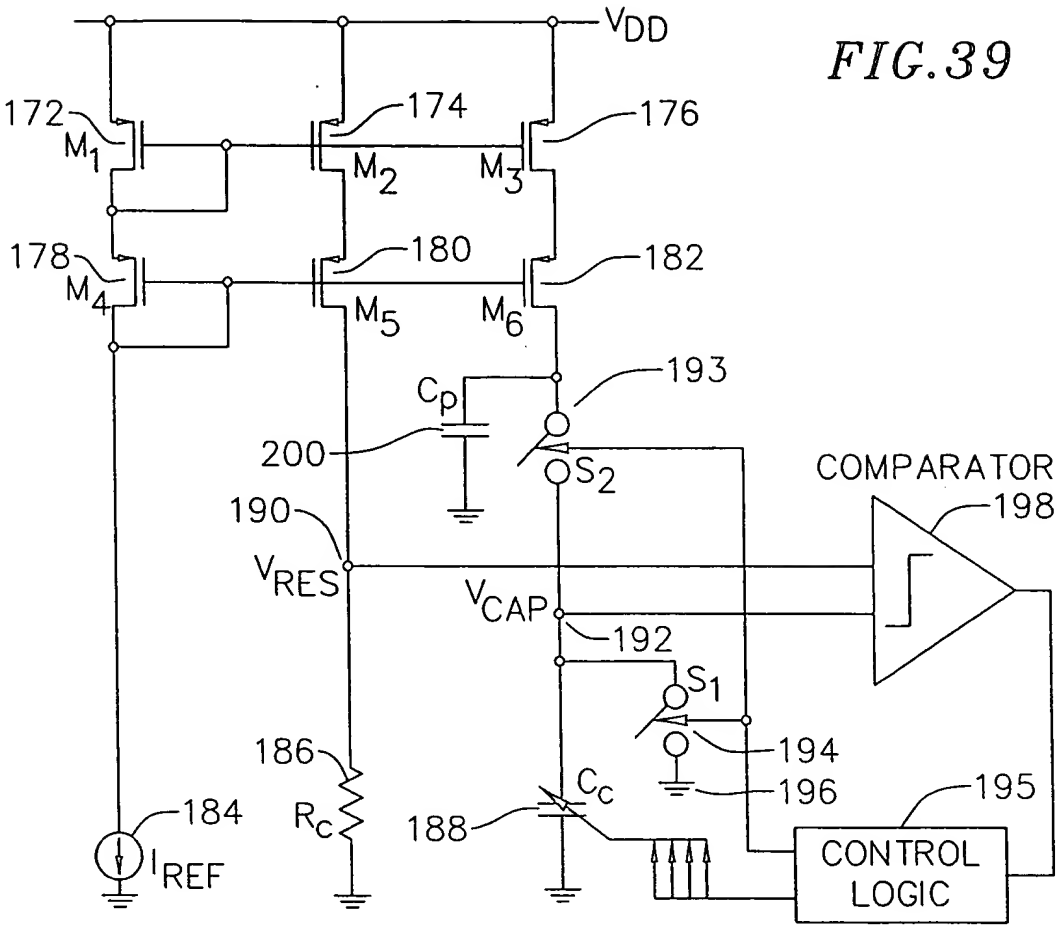


FIG. 40

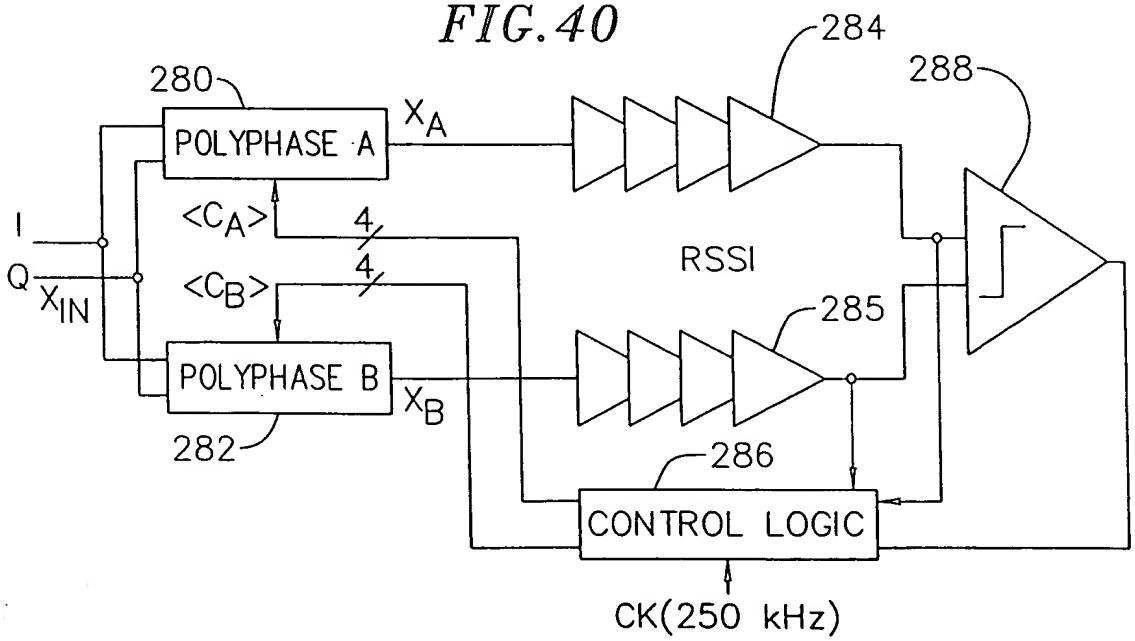


FIG. 41

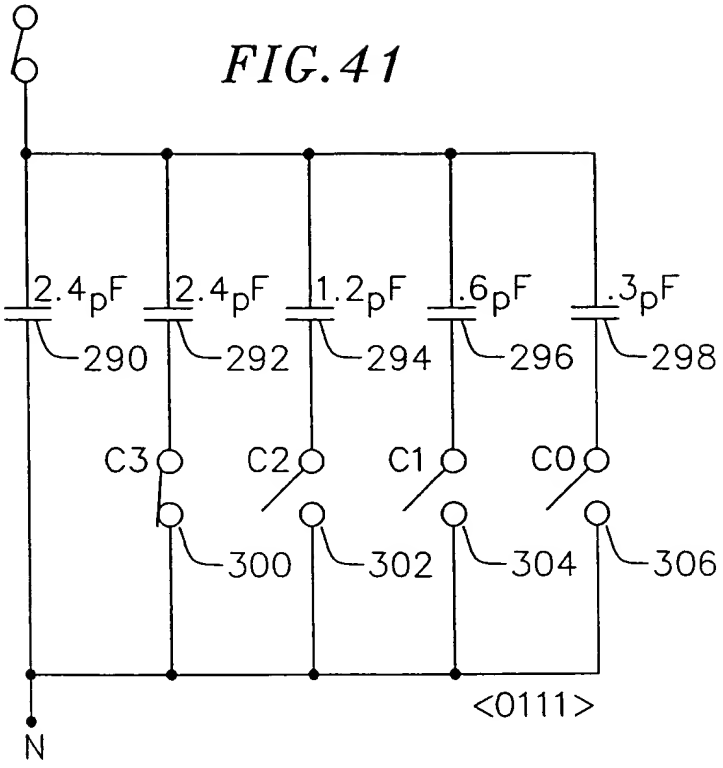


FIG. 42

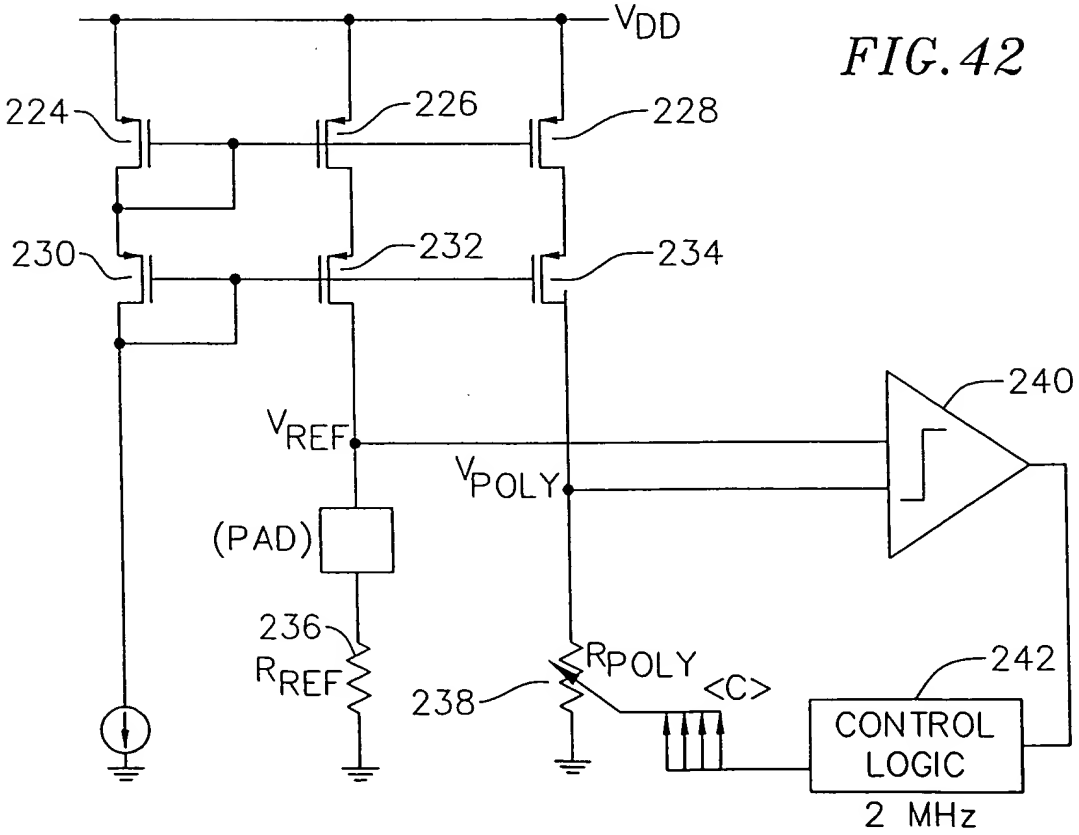


FIG. 43

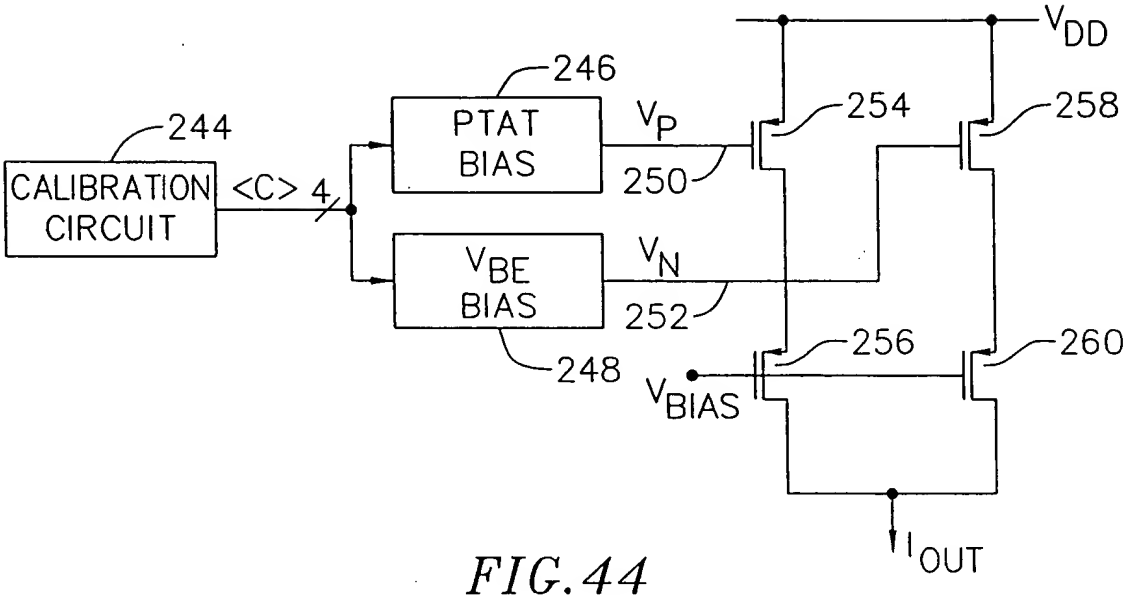


FIG. 44

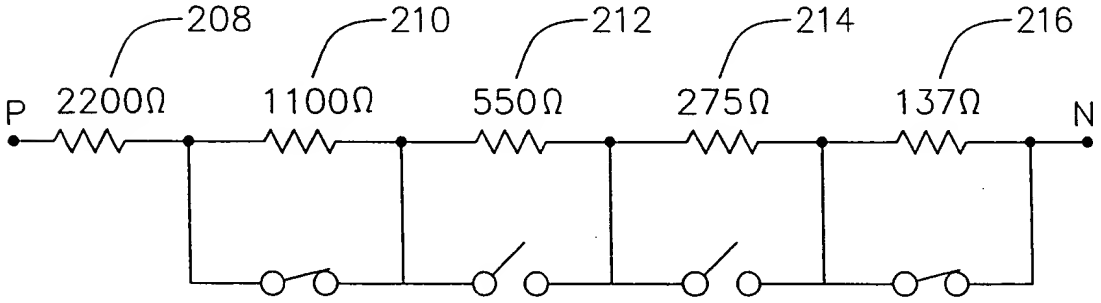


FIG. 45

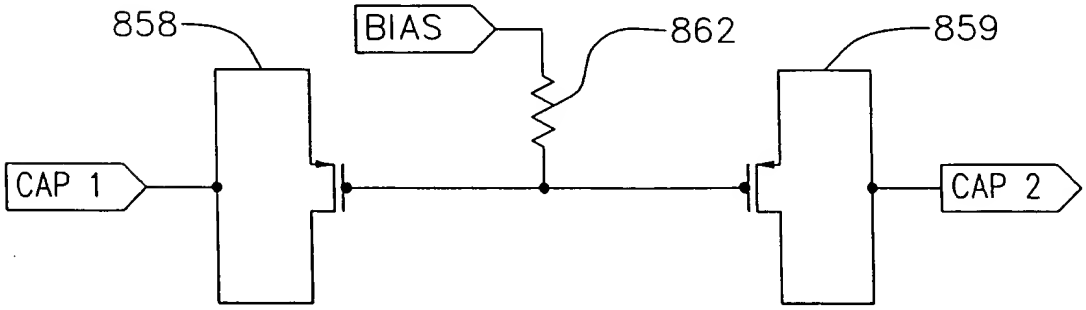


FIG. 46

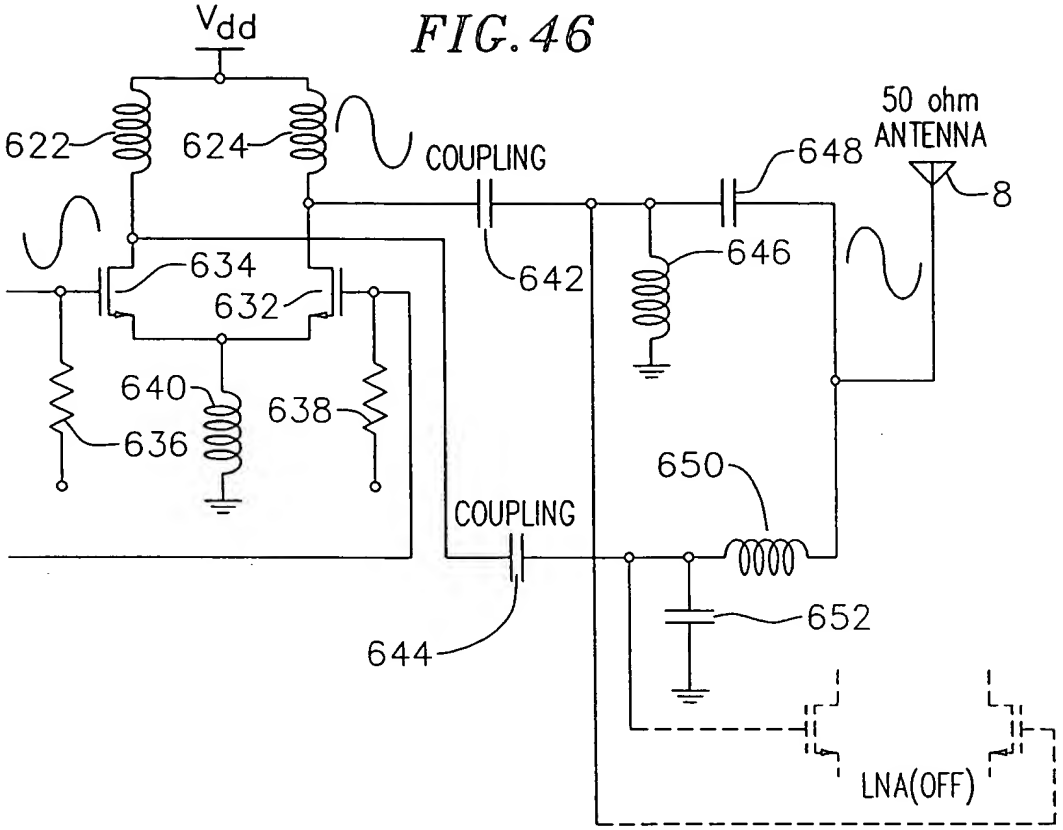
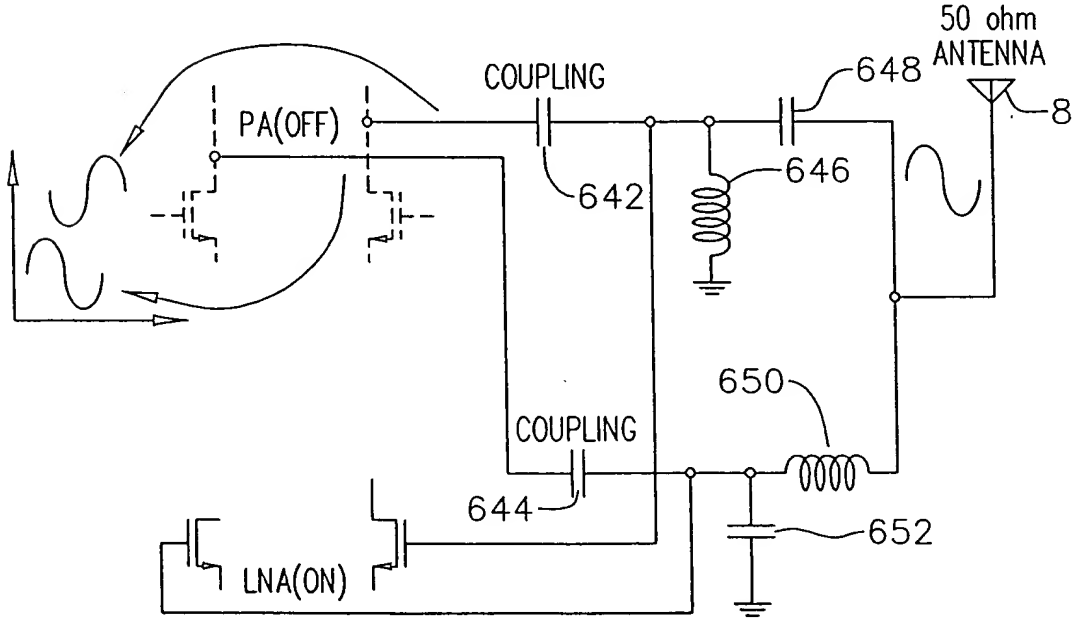

Vdd
622
624
COUPLING
50 ohm
ANTENNA
648
8
634
632
642
646
640
638
636
650
COUPLING
652
644
LNA(OFF)

FIG. 47


50 ohm
ANTENNA
COUPLING
648
8
PA(OFF)
642
646
650
COUPLING
644
652
LNA(ON)